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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,709	04/10/2001	David L. Anglin	08935-240001 / M-4931A	1782

26161 7590 07/14/2004

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EXAMINER	
MERCADO, JULIAN A	

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/829,709	ANGLIN, DAVID L.	
	Examiner	Art Unit	
	Julian Mercado	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4-26-04*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

This Office Action is responsive to applicant's amendment filed April 26, 2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-10, 16-19, 30-33, 42-45 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend (EP 0 962 997 A1) in view of Adams (U.S. Pat. 4,177,157).

Claims 11, 12 and 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams as applied to claims 1, 3-10, 16-19 and 31-33 above, and further in view of Andersen (U.S. Pat. 4,948,484).

Claims 13-15, 20-22, 39-41, 46-48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams as applied to claims 1, 3-10, 16-19 and 31-33 above, and further in view of Yagi (U.S. Pat. 4,923,637).

Claims 23 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams and Yagi as applied to claims 13-15, 20-22 and 24 above, and further in view of Lafdi and Wright. (Carbon Fibers from Handbook of Composites, 1998)

Claim 26 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams as applied to claims 1, 3-10, 16-19 and 30-33 above, and further in view of Singer (U.S. Pat. 4,005,183)

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams as applied to claims 1, 3-10, 16-19 and 30-33 above, and further in view of Lafdi and Wright and Singer.

Claims 24, 25, 50and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams as applied to claims 1, 3-10, 16-19 and 30-33 above, and further in view of Glasgow et al. (U.S. Pat. 6,506,355)

Claims 27 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams as applied to claims 1, 3-10, 16-19 and 30-33 above, and further in view of Mototani et al. (U.S. Pat. 5, 482,798)

Claims 28 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams as applied to claims 1, 3-10, 16-19 and 30-33 above, and further in view of Chalilpoyil et al. (U.S. Pat. 4,777,100)

Claims 29 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friend in view of Adams and Chalilpoyil et al. as applied to claim 28 above, and further in view of Callahan et al. (U.S. Pat. 6,287,730 B1)

The rejections above have been discussed in detail in the previous Office action and will not be reiterated, with the newly submitted claims noted as being modeled after previously submitted claims as follows: claim 39 is modeled after claim 13, claim 40 is modeled after claim 14, claim 41 is modeled after claim 15, claim 42 is modeled after claim 16, claim 43 is modeled

after claim 17, claim 44 is modeled after claim 18, claim 45 is modeled after claim 19, claim 46 is modeled after claim 20, claim 47 is modeled after claim 21, claim 48 is modeled after claim 22, claim 49 is modeled after claim 23, claim 50 is modeled after claim 24, claim 51 is modeled after claim 25, claim 52 is modeled after claim 26, claim 53 is modeled after claim 27, claim 54 is modeled after claim 28, claim 55 is modeled after claim 29, claim 56 is modeled after claim 30.

Response to Arguments

In maintaining the present ground of rejection(s), the examiner notes that the rejections have been discussed in detail in the previous Office Action, and as the scope of the present claims are presented unamended from those considered in the previous Office Action these rejections are maintained for the reasons already of record and for the additional reasons to follow.

Applicant's arguments filed with the present amendment have been fully considered, however, they are not persuasive for the following reasons:

Applicant submits that based on Friend's teaching of 5.14%, 4.16% and 4.02% by weight of fibrils for Examples 1, 2 and 3 (respectively), one of ordinary skill in the art would not be motivated to increase the concentration of fibers, such as in view of Adams teachings. This argument is not persuasive. Friend teaches that the percent utilization of manganese dioxide is based on a comparison of the actual utilization capacity with the theoretical utilization capacity. (page 6 line 57 et seq.) Contrary to applicant's assertions, it is believed that the increase in capacity and percentage of cathode utilization is not dependent on the amount of fibrils (whether

directly or inversely), instead, it is believed that these advantages are result-effective of the amount of manganese that is reduced from Mn^{+4} to Mn^{+3}. See, for example, Examples 2 and 3, in which the amount of manganese dioxide is equal in both examples (29.72) while the amount of zinc chloride ($ZnCl_2$) is *increased* in Example 3. [emphasis added] The percent utilization of manganese dioxide concomitantly increases from 46.7 to 50.6, respectively, all the while with the amount of fibrils being held *constant* at 2.33 between the two examples. [emphasis added]

For these reasons, applicant's assertions that the data in Friend favors a decrease in fibril concentration based on enhanced battery performance therewith is unfounded and not persuasive. The examiner maintains that while Friend does not explicitly teach more than about 6% of the carbon fibers, it would have been obvious to one of ordinary skill in the art to employ carbon fibers at more than 6% by weight for reasons taught by Adams such as enhancing the level of conductivity of the electrode. (see Adams, col. 4 line 20 et seq.) This reasoning is also found consistent within Friend's disclosure, i.e. "[t]he carbon microfibers increase the electrical conductivity of the cathode by forming an effective electrically conductive network throughout the chemically reducible material and physically bind or absorb liquid electrolyte dispersed throughout the cathode". (see Friend, page 5 line 39-41)

As to Andersen, applicant submits that the electrolytic manganese dioxide disclosed by the patentees is not used as a cathode in a primary alkaline battery. Applicant is reminded, however, that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Andersen is relied upon to show, *prima facie*, that the cathode active material can range from 25% to 92% by weight, and that absent of unexpected results the weight percentage of the active material *in the alkaline battery of Friend* is an optimizable parameter for a result-effective variable. *In re Boesch,* 617 F.2d 272, 205 USPQ 215 (CCPA 1980) As set forth in the previous Office action, the skilled artisan would find obvious to optimize the weight percentage of the cathode active material as it directly affects the battery's discharge capacity as demonstrated by Andersen in col. 3 line 49-65. Notwithstanding the above, Andersen is considered to teach or at least suggest the electrolytic manganese dioxide in an alkaline battery, i.e. "in the manufacture of present day alkaline batteries of the manganese dioxide/zinc type, electrolytic manganese dioxide is the preferred material for use as the cathodic (or depolarizing) reactant". (col. 1 line 14-17)

Arguments against the Yagi, Lafdi and Wright, Singer, Glasgow et al., Mototani et al., Chalilpoyil et al. and Callahan et al. appear to be directed to these references failing to remedy alleged differences between the combination of Friend, Adams and Andersen and the present claims. However, in view of the teachings of Friend, Adams and Andersen being maintained for the reasons discussed above, the rejections in view of and/or further in view of Yagi, Lafdi and Wright, Singer, Glasgow et al., Mototani et al., Chalilpoyil et al. and Callahan et al. are subsequently maintained for the reasons discussed in the previous Office action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

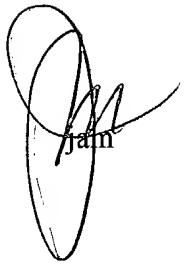
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



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